Sustainable Transportation Award Winner

UC/CSU Sustainability Conference
Santa Barbara, 2006
Translocator (Transit Locator)

- San Jose State University
- CSU: Transportation Demand Management
- Eyedin Zonobi, Manager, Transportation Solutions
A Downtown University

• Area = 154 acres
• SJSU has 30,000 students and 3,000 faculty and staff
• About 20,000 students come to campus on any weekday
  • Monday – Thursday, early morning – late evening
• UPD Parking Services operates
  • 3 main campus parking garages
  • 1 park & ride lot
  • A total of 7,000 parking spaces
Transit options at SJSU

• SJSU is served by:
  • Santa Clara Valley Transportation Authority (VTA) – local transit operator
    • Light Rail – two/three blocks
    • 16 bus routes – within walking distance from SJSU
  • Regional transit
    • Highway 17 Express bus – Santa Cruz
    • Three regional rail lines (ACE, Amtrak, Caltrain)
• SJSU has a University transit pass (Eco Pass) agreement with VTA
  • SJSU students and employees can have unlimited rides on all VTA buses and Light Rail
About Transportation Solutions

• The SJSU Transportation Solutions (TS) functions under the auxiliary organization Associated Students.

• TS was established in August 2000 to alleviate traffic congestion and reduce demand for limited campus parking facilities.

• TS is funded by:
  • Mandatory student fees ($43/student/year)
  • UPD - Parking fine revenues ($100,000/year)
  • Bay Area Quality Management District grant (Transportation Fund for Clean Air $100,000/year)

• On average, TS spends over $1.3 million on alternative transportation annually.
TS Operation

- Customer service - TS Center
- Administering the University transit pass (Eco Pass)
- Marketing and Outreach
- Developing and maintaining technical infrastructure (GIS, TS website, database management)
- Research and analysis
- Grant development
GIS Translocator

Transit Locator developed into 2 versions:

1. The early version was used to find student commuters near transit routes and for carpool matching
   - Started using in fall 2001
   - Also was used for transit trip planning
   - GIS training was needed to operate

2. The second version was developed strictly for transit trip planning.
   - 5-month completion time. Started using in spring 2003
   - No GIS training needed
The Translocator consists of:

- ESRI ArcView 3.1 GIS
- Map Objects
- Microsoft Visual Basic
- A base street map
- A database of all the local and regional transit routes and stops
Promoting Transit

- Student address data is geo-coded into the Translocator system.
- Translocator locates the students who live within a ½ mile of a direct transit route to SJSU.
- TS uses the list for targeted email messages to notify students about their transit options and to promote the nearest direct routes.
Santa Clara County Transit Routes/Stops

BEST PRACTICES

SJSU Students Geocoded Spring 2006 Semester

2006
¼ Mile Buffer for VTA Bus 23
½ Mile Buffer for LRT stations
Students targeted for carpool from SF
At the TS Center:

• When a trip plan is requested, TS commute specialists utilizes the Translocator to locate the person.

• The Translocator will automatically identify nearest transit route and stop.

• The TS commute specialist provide the user with a precise transit trip plan.
Translocator Trip Planner
Barriers

• Technology
  • Obtaining up-to-date electronic street map
  • GIS requires high-powered computers

• Data
  • Access to up-to-date student enrollment and address data
  • Access to GIS data for transit routes and stops
  • Students tend to register late. We get complete enrollment data after first day of classes

• Training
  • The team requires knowledge in multiple disciplines
    – GIS user/developer
    – Programming
    – Marketing and customer service
    – Local geography and mass transportation
Accomplishments

- Student surveys show four years in a row
  - increasing usage of alternatives transportation
  - declining percentage of students driving alone to campus
Accomplishments

% SJSU student population commuting by alternative transportation
(VTA, regional transit, carpooling, and bicycling)

- Fall 2001: 10.2%
- Fall 2002: 24.4%
- Fall 2003: 29.3%
- Fall 2004: 36.6%

VTA bus and Light Rail: 20.0%
All alternative modes: 30.0%
Accomplishments

% SJSU student population driving alone to campus

Drive alone + drive to Park & Ride Lot

- Fall 2001: 59.8%
- Fall 2002: 56.5%
- Fall 2003: 53.5%
- Fall 2004: 52.3%
Lessons learned

- GIS marketing enhances the effectiveness of alternative commute incentives, such as Eco Pass
- Relationships with other campus departments are important
- Availability of local transit options is essential
- Hardware, software, and human resources are keys to implementation
- University offers a suitable environment where student employees can be hired where they can coordinate their academic work with TS duties
Development team

• Past developers/GIS Technicians – graduate students
  • Antony Jayaparakash, Fall 2000 – Spring 2002
  • Dali Zhang, Spring 2002 – Spring 2004
  • Silvia Ravilla, Spring 2004 – Fall 2005
• Special thanks to Dr. Richard Taketa, SJSU Geography Department
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